

**REMARKS****Summary of the Office Action**

In the Office Action dated March 27, 2003, claim 3 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,484,867 to Lichtenhan *et al.* (hereinafter "*Lichtenhan*"). Claims 4 and 6-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Lichtenhan* in view of Dawes *et al.* (hereinafter "*Dawes*"). Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Lichtenhan* in view of *Dawes* and further in view of U.S. Patent No. 6,052,392 to Ueda *et al.* (hereinafter "*Ueda*").

**Applicants' Comments regarding the Dawes Reference**

With respect to *Dawes*, Applicants note that the Office Action has not provided a specific document number to identify the reference. It appears to Applicants that the Office Action may be referring to U.S. Patent No. 6,144,795 to *Dawes et al.* applied in the previous Office Action dated August 28, 2002. Applicants will proceed under this assumption. In the event that Applicants' understanding is incorrect, Applicants respectfully request that the Examiner notify Applicants of the proper document number in the next Office Communication.

**Summary of the Response to the Office Action**

Applicants have amended claims 3 and 4 to differently describe the invention. Applicants have added new claims 9-12 to differently describe the subject matter of the invention. Accordingly, claims 3-12 are now pending in this application.

**The Rejection of claim 3 under 35 U.S.C. § 102(b)**

Claim 3 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by *Lichtenhan*. Applicants have amended claim 3 to differently describe the invention. To the extent that this rejection might be reapplied to claim 3, as newly amended, it is respectfully traversed as follows.

Independent claim 3, as amended, recites a laser device combination including an optical fiber and an optical medium including the following features:

the optical medium is obtained by curing an oligomer substance so as to be changed to a polymer substance, said oligomer substance being substantially same as said polymer substance, said polymer substance including a repeating unit represented by a general formula  $\text{RSiO}_{1.5}$  wherein  $\text{RSiO}_{1.5}$  is selected from a group consisting of a polymethyl silsesquioxane, a polymethyl-hydride silsesquioxane, a polyphenyl silsesquioxane, a polyphenyl-methyl silsesquioxane, a phenyl silsesquioxane-dimethyl siloxane copolymer, a polyphenyl-vinyl silsesquioxane, polycyclohexyl silsesquioxane, a polycyclopentyl silsesquioxane, a polyhydride silsesquioxane, a poly(2-chloro ethyl) silsesquioxane, and a poly(2-bromo ethyl) silsesquioxane, or a mixture of said at least one member and a polysiloxane, said oligomer substance being changed to a substance containing a polymer.

Applicants respectfully submit that *Lichtenhan* does not teach or suggest the laser device combination recited in claim 3 including at least these particular features.

In the instant invention, as recited in claim 3, the optical medium is a cured oligomer substance that includes a repeating unit represented by a general formula  $\text{RSiO}_{1.5}$  wherein  $\text{RSiO}_{1.5}$  is selected from the group silsesquioxanes specified above. On the contrary, *Lichtenhan's* disclosure relates to substances having a general formula of the form  $\text{Si}_7\text{R}_7\text{O}_9(\text{OA})_3$  as recited in the Abstract of *Lichtenhan* and at column 2, line 36,  $\text{Si}_7\text{R}_7\text{O}_{12}\text{M}(\text{Z})$  as recited at column 2, line 41, and at column 3, line 33,  $\text{MSi}_7\text{R}_7\text{O}_{12}$  as recited as column 3, line 55 and column 4, lines 27, 38 and 62. Applicants respectfully submit that *Lichtenhan* does not teach or suggest a laser device including an optical medium with a polymer substance including a repeating unit represented by a general formula  $\text{RSiO}_{1.5}$ , where  $\text{RSiO}_{1.5}$  is selected from the particular group of silsesquioxanes recited in claim 3.

In view of the foregoing remarks, Applicants respectfully assert that *Lichtenhan* does not teach or suggest each feature of independent claim 3, as amended. As pointed out in MPEP § 2131, “[to] anticipate a claim, the reference must teach every element of the claim.” Thus, “[a] claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art of reference. Verdegaal Bros. V. Union Oil Of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987).” Thus, Applicants respectfully

submit that claim 3 is in condition for allowance as not being anticipated by *Lichtenhan*. Accordingly, Applicants respectfully request that the rejection of claim 3 under 35 U.S.C. § 102(b) be withdrawn.

**The Rejection of claim 4 under 35 U.S.C. § 103(a)**

Claims 4 and 6-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Lichtenhan* in view of *Dawes*. Applicants have amended claim 4 to differently describe the invention. To the extent that this rejection might be reapplied to claim 4, as newly amended, it is respectfully traversed as follows.

Independent claim 4, as amended, recites a laser device combination including an optical medium including the following features:

the optical medium contains an amorphous silica produced by curing, said amorphous silica including a repeating unit represented by a general formula  $\text{RSiO}_{1.5}$  wherein  $\text{RSiO}_{1.5}$  is selected from a group consisting of a poly(2-chloro ethyl) silsesquioxane, a poly(2-bromo ethyl) silsesquioxane, and a mixture thereof.

Applicants respectfully submit that neither *Lichtenhan* nor *Dawes*, whether taken singly or in combination, teaches or suggests the laser device combination recited in claim 4 including at least these particular features.

Applicants respectfully submit that, in light of the discussion set forth above with respect to independent claim 3, *Lichtenhan* does not teach or suggest “a repeating unit represented by a general formula  $\text{RSiO}_{1.5}$  wherein  $\text{RSiO}_{1.5}$  is selected from a group consisting of a poly(2-chloro ethyl) silsesquioxane, a poly(2-bromo ethyl) silsesquioxane” (Emphasis added).

Applicants further submit that *Dawes* merely recites a plurality of groups consisting of instances of siloxanes, silanes and oxysilanes. Applicants respectfully submit that *Dawes* does not teach or suggest the laser device combination including an optical medium that contains an amorphous silica produced by curing, where the amorphous silica includes a repeating unit  $\text{RSiO}_{1.5}$ , and where the repeating unit includes at least one member selected from the group of the poly-silsesquioxanes recited above, and as claimed.

Accordingly, Applicants respectfully submit that *Dawes* fails to cure the deficiency of *Lichtenhan* with regard to the feature of “amorphous silica including a repeating unit represented by a general formula  $\text{RSiO}_{1.5}$  wherein  $\text{RSiO}_{1.5}$  is selected from a group consisting of a poly(2-chloro ethyl) silsesquioxane, a poly(2-bromo ethyl) silsesquioxane.”

In view of the foregoing remarks, Applicants respectfully assert that neither *Lichtenhan* nor *Dawes*, whether taken singly or in combination, teaches or suggests the laser device combination recited in independent claim 4. Thus, Applicants respectfully submit that claim 4 is in condition for allowance as being patentable over *Lichtenhan* in view of *Dawes*. Accordingly, Applicants respectfully request that the rejection of claim 4 under 35 U.S.C. § 103(a) be withdrawn.

#### **The Dependent Claims 5-8**

Claims 6-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Lichtenhan* in view of *Dawes*. Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Lichtenhan* in view of *Dawes* and further in view of *Ueda*.

Applicants respectfully submit that claims 5-8 are in condition for allowance at least because of their dependence upon allowable claims 3 and 4. Applicants further submit that the applied *Ueda* reference fails to cure the deficiencies of the *Dawes* and *Lichtenhan* references, as set forth above. Accordingly, Applicants respectfully request that the rejections of claims 5 and 6-8 under 35 U.S.C. § 103(a) be withdrawn.

#### **The Newly Added Claims 9-12**

Applicants have added new claims 9-12 to differently describe the subject matter of the invention. Applicants respectfully submit that no new matter is being introduced by these claims as they are supported by the original specification and figures as-filed.

Applicants respectfully submit that the newly added claims 9-12 are allowable over the cited references.

**Conclusion**

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of all rejections and objections and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution.

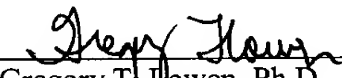
If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully Submitted,

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Dated: July 28, 2003

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